operating instructions for RayTemp™ 38 infrared & probe thermometer

Simply aim the RayTemp 38 infrared (IR) thermometer at the target and depress the trigger to measure the surface temperature. The "SCAN" icon will appear in the LCD display. When the trigger is released the reading is automatically held for 60 seconds and "HOLD" is displayed, after which the thermometer will shut down.

MEASUREMENT ZONE/TARGET DISTANCE

The measurement zone is proportional to the distance the RayTemp is away from the target. The thermometer is equipped with a 50:1 lens. If the target is 1250mm away, the measurement zone will be 25mm across.

THERMOCOUPLE PROBE/SENSOR

To display the thermocouple probe temperature, press and hold the "Mode" button until "PRB" is displayed. If the thermocouple breaks or is not connected, in addition the instrument will display 'noP'. The thermometer should only be used with thermocouple type K nickel-chromium/nickel-aluminium probes or sensors that meet BS EN 60584:1996 standard and are fitted with a suitable miniature thermocouple plug.

MAXIMUM, MINIMUM, DIFFERENTIAL & AVERAGE

To access the maximum reading, press the "Mode" button until "MAX" is displayed. To access the minimum reading, press the "Mode" button again until "MIN" is displayed. To access the differential readings, press the "Mode" button until "dIF" is displayed. To access the average reading, press the "Mode" button again until "AVG" is displayed. Maximum and minimum, differential and average readings will be reset when the instrument powers down.

Max/min reading can also be displayed whilst using the probe function. To view the "MIN" reading, press and hold the "°C/°F" button or to view the "MAX" reading, press and hold the "Lock" button.

HIGH & LOW ALARMS

To access and set the high alarm, press the "Mode" button until "HAL" is displayed. To adjust the high alarm value, use the "°C/°F" and the "Lock" buttons. To access and set the low alarm, press the "Mode" button until "LAL" is displayed. To adjust the low alarm value, use the "°C/°F" and the "Lock" buttons. An audible warning will sound and the "HI" or "LOW" icon will be displayed in the LCD when the temperature measured is outside the high or low alarm parameters.

°C/°F

The "°C/°F" button toggles between celsius and fahrenheit measurements. Press and hold the "°C/°F" button without depressing the trigger until the °C or °F scale changes. Please note: the instrument's default is to start up in °C.

LOCK FUNCTION

The "Lock" button temporarily disables the auto power off, and is used for continuous monitoring of temperatures for up to 60 minutes. Press the "Lock" button without depressing the trigger until the "LOCK" icon is displayed in the LCD. The unit will now continuously measure temperature without the need to depress the trigger. To turn off the lock function, press and hold the "Lock" button.

LCD BACKLIGHT

The LCD backlight function can be turned on or off by depressing the trigger and simultaneously pressing the "Lock" button.

EMISSIVITY

The RayTemp 38 has a default emissivity of 0.95 but is adjustable from 0.1 to 1.00. The closer the emissivity value is set to the actual emissivity value of the object being measured, the more accurate the readings will be. To adjust the emissivity press the "Emis." button and use the "°C/°F" and the "Lock" buttons. Note: non-contact infrared thermometers are not recommended for use in measuring shiny or polished metals.

LASER POINTERS

The dual laser pointer function can be turned on or off by depressing the trigger and simultaneously pressing the "°C/°F" button. For safety, the laser pointer will only activate when the trigger button is depressed. The laser module is a Class 2 device that has a maximum power output of less than 1 mW at a wavelength of 660nm. Prolonged, continuous exposure such as staring at the beams can be harmful and should be avoided. Do not look at the beams with any optical instrument.

ERROR MESSAGES

If the measured temperature goes below or above the range of the instrument, "Hi" or "Lo" will appear in the LCD display. When the measured temperature returns within the range of the instrument, readings will automatically be displayed.

Er2 will or Er3 will appear in the LCD display when the unit is exposed to rapid changes in ambient temperature. The thermometer should be allowed time to stabilise within its working environment, allow 30 minutes.

For all other error messages, the user will need to reset the RayTemp 38 by removing the batteries, then reinsert the batteries. If the error message remains, contact the ETI service department.

STORAGE & CLEANING

The sensor lens is the most delicate part of the RayTemp 38. The lens should be kept clean at all times, care should be taken when cleaning the lens using only a soft cloth or cotton swab with water or medical alcohol, allowing the lens to fully dry before using the RayTemp 38, do not submerge any part of the unit. The instrument should be stored at room temperature between +10 to +40°C.

BATTERIES

The low battery icon (left) indicates that the batteries need replacing as soon as possible. The instrument will continue to function but to maintain accuracy new batteries are required. Replace both batteries with AAA or equivalent 1.5 volt batteries.

EMC/RFI

Readings may be affected if the unit is operated within a radio frequency electromagnetic field strength of approximately 3 volts per metre, but the performance of the instrument will not be permanently affected.

WARRANTY/GUARANTEE

All ETI manufactured instruments carry a two-year warranty/guarantee against defects in either components or workmanship. During this period, products that prove to be defective will, at the discretion of ETI, be either repaired or replaced without charge. Instruments that have not been manufactured by ETI will be subject to a warranty period of twelve months. Such warranties do not apply to probes, where a six-month period is offered. This six-month period also applies to a probe where it is an integral part of an instrument.

The product warranty/guarantee does not cover damage caused by fair wear and tear, abnormal storage conditions, incorrect use, accidental misuse, abuse, neglect, misapplication or modification, or use with non-ETI hardware/software. The user should make themselves aware of the proper use of measurement equipment, including maintenance, calibration, and comparison with other instruments. Information relating to this may be obtained from ETI and/or www.etiltd.co.uk/care. Full details of liability are available within ETI's terms & conditions of sale, available by request or at www.etiltd.co.uk/terms. In line with our policy of continuous development, we reserve the right to amend our product specification without prior notice.

Nothing in these conditions will reduce your statutory rights relating to faulty or misrepresented goods. For further information about your statutory rights contact your local authority Trading Standards Department or Citizens' Advice Bureau. Claims under warranty should be sent to the address below.

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